

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

1. (currently amended): An ultrasonic probe to be used when connected to an external apparatus main body, said probe comprising:

a transducer array including plural ultrasonic transducers, said transducers comprising elements in an original pattern that are determined to be working and elements in a reconfigured pattern that includes additional elements outside of said original pattern that are determined to be working ;

connecting means for connecting ultrasonic transducers selected from among said plural ultrasonic transducers to said external apparatus main body; and

identification information holding means for holding identification information on said ultrasonic probe, said identification information being associated with arrangement information and/or characteristic information on said selected ultrasonic transducers within said transducer array.

2. (original): An ultrasonic probe according to claim 1, wherein said connecting means includes wiring and electrodes for supplying the identification information on said ultrasonic probe held

by said identification information holding means to said external apparatus main body.

3. (currently amended): An ultrasonic probe to be used when connected to an external apparatus main body, said probe comprising:

a transducer array including plural ultrasonic transducers, said transducers comprising elements in an original pattern that are determined to be working and elements in a reconfigured pattern that includes additional elements outside of said original pattern that are determined to be working ; and

a connector, having plural electrodes, for connecting ultrasonic transducers selected from among said plural ultrasonic transducers to said external apparatus main body,

wherein at least two kinds of connecting relationships between said selected ultrasonic transducers and said plural electrodes are set up in regard to plural ultrasonic probes.

4. (currently amended): An ultrasonic transmitting and receiving apparatus to be used when connected to an ultrasonic probe including a transducer array including plural ultrasonic transducers, said transducers comprising elements in an original pattern that are determined to be working and elements in a reconfigured pattern that includes additional elements outside of said original pattern that are determined to be working, connecting means for connecting ultrasonic transducers selected from among said plural ultrasonic transducers to an ultrasonic transmitting and receiving apparatus main body, and identification information holding means for holding identification information, said apparatus comprising:

plural transmitting circuits for respectively generating plural driving signals to be supplied to said ultrasonic probe so as to transmit an ultrasonic beam;

plural receiving circuits for respectively processing plural detection signals outputted from said ultrasonic probe which has received an ultrasonic echo; and

control means for controlling delay amounts of the plural driving signals in said plural transmitting circuits and/or delay amounts of the plural detection signals in said plural receiving circuits in correspondence with the ultrasonic probe identified on the basis of the identification information.

5. (original): An ultrasonic transmitting and receiving apparatus according to claim 4, wherein said control means calculates delay amounts on the basis of arrangement information and/or

characteristic information on said selected ultrasonic transducers with regard to plural ultrasonic probes in advance,

and controls recording means to record delay amount tables in correspondence with the identification information on the respective ultrasonic probes.

6. (original): An ultrasonic transmitting and receiving apparatus according to claim 5, wherein said control means controls

said recording means to read out a delay amount table corresponding to the identification information supplied by said connecting means.

7. (currently amended): An ultrasonic transmitting and receiving apparatus to be used when connected to an ultrasonic probe including a transducer array including plural ultrasonic transducers, said transducers comprising elements in an original pattern that are determined to be working and elements in a reconfigured pattern that includes additional elements outside of said original pattern that are determined to be working, connecting means for connecting ultrasonic transducers selected from among said plural ultrasonic transducers to an ultrasonic transmitting and receiving apparatus main body, and identification information holding means for holding identification information, said apparatus comprising:

plural transmitting circuits for respectively generating plural driving signals to be supplied to said ultrasonic probe so as to transmit an ultrasonic beam;

plural receiving circuits for respectively processing plural detection signals outputted from said ultrasonic probe which has received an ultrasonic echo; and

control means for controlling amplitudes and/or waveforms of the plural driving signals in said plural transmitting circuits in correspondence with the ultrasonic probe identified on the basis of the identification information.

8. (currently amended): An ultrasonic transmitting and receiving apparatus to be used when connected to an ultrasonic probe including a transducer array including plural ultrasonic transducers, said transducers comprising elements in an original pattern that are determined to be working and elements in a reconfigured pattern that includes additional elements outside of said original pattern that are determined to be working, connecting means for connecting ultrasonic transducers selected from among said plural ultrasonic transducers to an ultrasonic transmitting and receiving apparatus main body, and identification information holding means for holding identification information, said apparatus comprising:

plural transmitting circuits for respectively generating plural driving signals to be supplied to said ultrasonic probe so as to transmit an ultrasonic beam;

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plural receiving circuits for respectively processing plural detection signals outputted from said ultrasonic probe which has received an ultrasonic echo; and

control means for controlling gains and/or bandwidths in said plural receiving circuits in correspondence with the ultrasonic probe identified on the basis of the identification information.